

SEVERN

TRENT

SERVICES

## CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.  
3350 George Washington Way  
Richland, WA 99352

**STL Richland**

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Tel: 509 375 3131  
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July 10, 2001

Attention: Joan Kessner

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SAF Number	:	B99-014
Date SDG Closed	:	July 3, 2001
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W03553
Data Deliverable	:	7-Day / Summary

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## I. Introduction

On July 10, 2001, two water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Bechtel Hanford, Inc. (BHI) specific IDs:

<u>STLR ID#</u>	<u>BHI ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
9EFXG210	B12611	WATER	7/3/01
9EFXG510	B12612	WATER	7/3/01

## II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical errors.

The requested analysis was:

**Gas Proportional Counting**  
Total Strontium by method RICH-RC-5006

**RECEIVED**  
NOV 15 2001

**EDMC**

Bechtel Hanford, Inc.

July 10, 2001

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### III. Quality Control

The analytical results for each analysis performed under SDG W03553 includes a minimum of two Laboratory Control Samples (LCS) and one method (reagent) blank. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

### IV. Comments

#### **Gas Proportional Counting**

##### Total Strontium by method RICH-RC-5006:

The achieved MDA for sample B12611 does not meet the CRDL due to sample matrix effects. The detected activity exceeds the achieved MDA, therefore the result is accepted for reporting. Except as noted, the laboratory control samples, batch blank and sample results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Jackie Waddell  
Project Manager

000003

## Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D57174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

## Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship,  $R = \text{constants} * f(x,y,z,...)$ . The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties ( $u_i$ ) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty ( $u_c$ ) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value ( $S/\sqrt{n}$ ), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

## Report Definitions

<b>Action Lev</b>	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation $(\text{Result}/\text{Expected}) - 1$ as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or STL Richland.
<b>Count Error (#s)</b>	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
<b>Total Uncert (#s) <math>u_c</math> - Combined Uncertainty.</b>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, $u_c$ the combined uncertainty. The uncertainty is absolute and in the same units as the result.
<b>(#s), Coverage Factor CRDL (RL)</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.  Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
<b>Lc</b>	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin}) / \text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
<b>Lot-Sample No</b>	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
<b>MDC MDA</b>	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin}) / \text{SCntMin}) + 2.71 / \text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol}) * \text{IngrFct})$ . For LSC methods the batch blank is used as a measure of the background variability.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
<b>Rst/MDC</b>	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Rst/TotUcert</b>	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
<b>RER</b>	The equation Replicate Error Ratio = $(S - D) / [\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

**Sample Results Summary**

Date: 10-Jul-01

**STL Richland STLRL**

Ordered by Client Sample ID, Batch No.

Report No. : 13817

SDG No: W03553

Client ID	Work Order Number	Parameter	Result +- Uncertainty	Qual	Units	Yield	MDC MDA	RER
B12611	EFXG21AA	STRONTIUM	1.97E+03 +- 5.7E+02 (2s)		pCi/L	94.70%	1.17E+01	
B12612	EFXG51AA	STRONTIUM	1.07E+02 +- 3.1E+01 (2s)		pCi/L	97.00%	3.56E+00	

Number of Results: 2

**QC Results Summary**  
**STL Richland STLRL**  
 Ordered by QC Type, Batch No.

Date: 10-Jul-01

Report No. : 13817

SDG No.: W03553

QC Type	Work Order Number	Parameter	Result +- Uncertainty	Qual	Units	Yield	Recovery	Bias	MDC MDA
BLANK QC	EF1JA1AA	STRONTIUM	-3.16E-01 +- 1.49E+00 (2s) U		pCi/L	94.30%			3.65E+00
LCS	EF1JA1AC	STRONTIUM	5.26E+01 +- 1.58E+01 (2s)		pCi/L	92.00%	77.95%	-0.2	3.49E+00
LCS	EF1JA1AD	STRONTIUM	5.85E+01 +- 1.75E+01 (2s)		pCi/L	86.70%	86.39%	-0.1	3.77E+00

Number of Results: 3

# FORM I

## SAMPLE RESULTS

Date: 10-Jul-01

Lab Name: STL Richland

SDG: W03553

Collection Date: 7/3/01 8:25:00 AM

Lot-Sample No.: J1G030241-1

Report No.: 13817

Received Date: 7/3/01 1:15:00 PM

Client Sample ID: B12611

COC No.: B99-014-033

Matrix: WATER LIQUID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Count Qual Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 1186534	Work Order: EFXG21AA	Report DB ID: 9EFXG210									
STRONTIUM	1.97E+03	5.1E+01	5.7E+02	1.17E+01	pCi/L	94.70%	(168.9)	7/9/01 07:04 p		0.06	SR8990
					5.40E+00	2.00E+00	(77.2)			L	GPC26D

Number of Results: 1

Comments:

800000

# FORM I

## SAMPLE RESULTS

Date: 10-Jul-01

Lab Name: STL Richland

SDG: W03553

Collection Date: 7/3/01 8:26:00 AM

Lot-Sample No.: J1G030241-2

Report No.: 13817

Received Date: 7/3/01 1:15:00 PM

Client Sample ID: B12612

COC No.: B99-014-033

Matrix: WATER LIQUID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 1186534	Work Order: EFXG51AA				Report DB ID: 9EFXG510							
STRONTIUM	1.07E+02		6.6E+00	3.1E+01	3.56E+00	pCi/L	97.00%	(30.2)	7/9/01 07:04 p		0.2	SR8990
						1.65E+00	2.00E+00	(32.5)			L	GPC27A

Number of Results: 1

Comments:

600000



# FORM II BLANK RESULTS

Date: 10-Jul-01

Lab Name: STL Richland

SDG: W03553

Lot-Sample No.: J1G050000-534

Report No. : 13817

Matrix: WATER

Parameter	Result	Qual	Count Error (2 s)	Total Uncert( 2 s)	MDC MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 1186534	Work Order: EF1JA1AA			Report DB ID: EF1JA1AB								
STRONTIUM	-3.16E-01	U	1.5E+00	1.5E+00	3.65E+00	pCi/L	94.30%	-0.09	7/9/01 07:04 p		0.2	SR8990
					1.69E+00	2.00E+00		-0.43			L	GPC27B

Number of Results: 1

Comments:

000010

# FORM II LCS RESULTS

Date: 10-Jul-01

Lab Name: STL Richland

SDG: W03553

Lot-Sample No.: J1G050000-534

Report No. : 13817

Matrix: WATER

Parameter	Result	Qual	Count Error ( 2 s)	Total Uncert( 2 s)	MDC MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 1186534	Work Order: EF1JA1AC			Report DB ID: EF1JA1CS									
STRONTIUM	5.26E+01		4.8E+00	1.6E+01	3.49E+00	pCi/L	92.00%	6.75E+01	1.3E+00	77.95%	7/9/01 07:04 p	0.2	SR8990
							Rec Limits:	70.	130.	-0.2		L	GPC27C
Batch: 1186534	Work Order: EF1JA1AD			Report DB ID: EF1JA1DS									
STRONTIUM	5.85E+01		5.2E+00	1.8E+01	3.77E+00	pCi/L	86.70%	6.77E+01	1.3E+00	86.39%	7/9/01 07:04 p	0.2	SR8990
							Rec Limits:	70.	130.	-0.1		L	GPC27D

Number of Results: 2

Comments:

000011

SEVERN

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SERVICES

Data Review Checklist  
RADIOCHEMISTRY

Priority

Lot Number: JIG 030241				
Client ID: BHI				
Due Date: 7-10-01				
QC Batch Number: 1186534		SDG Number: W03553		
Method Test Parameter: TOTAL SR				
Matrix: Water				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
A. Calibration				
1. Is the calibration documentation included where applicable?			✓	✓
B. Sample Analysis				
1. Are the sample yields within acceptance criteria?	✓			
2. Were all sample holding times met?			✓	
3. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓			
C. QC Samples				
1. Is the blank yield within acceptance criteria?	✓			
2. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓			
3. Does the blank result meet the Contract criteria?	✓			
4. Is the blank result < the Contract Detection Limit?	✓			
5. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓	
6. Is the LCS result within acceptance criteria?	✓			
7. Is the LCS yield within acceptance criteria?	✓			
8. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓			
9. Do the MS/MSD results and yields meet acceptance criteria?			✓	
10. Do the duplicate sample results and yields meet acceptance criteria?			✓	
D. Other				
1. Are all Nonconformances included and noted?			✓	
2. Are all required forms filled out?	✓			
3. Was the correct methodology used?	✓			
4. Was transcription checked?	✓			
5. Were all calculations checked at a minimum frequency?	✓			
6. Were units checked?	✓			✓

Comments on any "No" response: RDL = 40 pCi/L 8 7-10-01

First Level Review: [Signature]

Date: 7-10-01

Second Level Review: [Signature]

Date: 7/10/01

## CHAIN OF CUSTODY

000013

Q-27040

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-014-033		Page 1 of 1													
Collector <b>Kevin D. HUGHES</b>		Company Contact Julian Laurenz		Telephone No. 372-9582		Project Coordinator TRENT, SJ		Price Code <b>1D</b> Data Turnaround <b>7 Days</b>													
Project Designation 100-NR-2 Pump & Treat Operational Sampling		Sampling Location 100-NR-2		SAF No. B99-014		Air Quality <input type="checkbox"/>															
Ice Chest No. <b>ERC 97-079</b>		Field Logbook No. <b>EL-1345-2</b>		COA R10NR2C560		Method of Shipment Govt. Vehicle															
Shipped To Severn Trent Incorporated		Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A																	
POSSIBLE SAMPLE HAZARDS/REMARKS																					
Special Handling and/or Storage  <b>JIG-030241</b>				Preservation	None																
				Type of Container	P																
				No. of Container(s)	1																
				Volume	500mL																
SDC <b>Tue 7-10</b> <b>W03553</b> <b>SAMPLE ANALYSIS</b>				Strontium-89,90 -- Total Sr																	
Sample No.		Matrix *		Sample Date		Sample Time															
B12611 <b>EFXG-2</b>		WATER		<b>7-2-01</b>		<b>08:25</b>		✓													
B12612 <b>EFXG-5</b>		WATER		<b>7-2-01</b>		<b>08:26</b>		✓													
				<b>3/21/73-01</b>																	
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS						Matrix *							
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		INFLUENT - <b>B12611</b> EFFLUENT - <b>B12612</b>						S=Soil SE=Sediment SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other							
<b>Kevin D. HUGHES</b>		<b>7-3-01</b>		<b>R. F. Allen</b>		<b>12:00</b>															
<b>R. F. Allen</b>		<b>7-3-01</b>		<b>R. F. Allen</b>		<b>7-3-01</b>															
<b>R. F. Allen</b>		<b>7-3-01</b>		<b>R. F. Allen</b>		<b>7-3-01</b>															
<b>R. F. Allen</b>		<b>7-3-01</b>		<b>R. F. Allen</b>		<b>7-3-01</b>															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time															
LABORATORY SECTION		Received By		Title		Date/Time															
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time															

000014



STL Richland  
Sample Check-in List

Date/Time Received: 7-3-01 13:15

Client: BHI

SDG #: W03553 NA ☐

Work Order Number: 110-030241

SAF #: B09-014 NA ☐

Shipping Container ID: ERC 97-079

Chain Of Custody #: B09-014-033

1. Custody Seals on shipping container intact? NA ☐ Yes ☐ No ☒
2. Custody Seals dated and signed? NA ☐ Yes ☐ No ☒
3. Chain of Custody record present? Yes ☒ No ☐
4. Cooler temperature: \_\_\_\_\_ NA ☒
5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA ☐ Yes ☐ No ☒
8. Samples have:  
☒ tape \_\_\_\_\_ hazard labels  
☒ custody seals \_\_\_\_\_ appropriate samples labels
9. Samples are:  
☒ in good condition \_\_\_\_\_ leaking  
\_\_\_\_\_ broken \_\_\_\_\_ have air bubbles  
(Only for samples requiring head space)
10. Sample pH taken? NA ☒ pH < 2 ☐ pH > 2 ☐
11. Were any anomalies identified in sample receipt? Yes ☐ No ☒
12. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: Mehul Arora Date: 7-3-01 13:15

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

# Client Sample Screening Results

03-Jul-01

② 7/5/01

CLIENT CODE	ID	MATRIX	RECEIVED	DETECTOR	ACQ DATE	SAMPLE	MINUTES	CNTS A	NET CPM A	CNTS B	NET CPM B
BHI	B12611	EFXG2	7/3/01 1:45:00 PM	QUAD23B	7/3/01 2:26:56 PM	B12611	30	4	0.067083333	104	2.55291667
		LIQUID		Bkg:	7/3/01 3:55:19 AM		800	53	0.06625	731	0.91375
<b>Anl Date:</b> 7/3/01 <b>Tot Sa, Alq:</b> 5.00E-01 , 1.00E+00 <b>Alp;</b> (Dpm/ 1.39E-01    (uCi/ 3.14E-05    (pCi/ 6.28E+01    ± 1.9E+02 <b>CAT</b> 4.0E-01 <b>Lab</b> <b>Ppt mg:</b> 0.1 <b>Units:</b> L , ml <b>Bet;</b> Alq): 4.80E+00    Sa): 1.08E-03    L/g): 2.16E+03    ± 2.9E+02    I    2.3E-02 <b>Alq</b> L/g											
BHI	B12612	EFXG5	7/3/01 1:45:00 PM	QUAD23C	7/3/01 2:26:56 PM	B12612	30	7	0.162083333	48	0.605
		LIQUID		Bkg:	7/3/01 3:55:19 AM		800	57	0.07125	796	0.995
<b>Anl Date:</b> 7/3/01 <b>Tot Sa, Alq:</b> 5.00E-01 , 1.00E+00 <b>Alp;</b> (Dpm/ 4.47E-01    (uCi/ 1.01E-04    (pCi/ 2.01E+02    ± 2.0E+02 <b>CAT</b> 1.2E-01 <b>Lab</b> <b>Ppt mg:</b> 0.1 <b>Units:</b> L , ml <b>Bet;</b> Alq): 1.07E+00    Sa): 2.41E-04    L/g): 4.83E+02    ± 2.0E+02    I    1.0E-01 <b>Alq</b> L/g											

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03-Jul-01

STL Richland, SCP V2.4

1

RQC053

Parent Batch:  
Associated Batches:**PRIORITY**Severn Trent Laboratories, Inc.  
Information Sheet Rad PrepRun Date: 7/05/01  
Time: 17:11:13

Page: 1

\*\*\*\*\*  
\* QC BATCH: 1186534 \*  
\*\*\*\*\*

W03553

TH: Total Strontium by GPC  
CG: Sr-Total Prp/SepRCS006  
SI: CLIENT: HANFORD

Analytical Due Date: 7/10/01

Project Manager: JW2

Lot# Work Order	Analyst Due Client Matrix	Client Name Aliquot Geometry	Count	Ave Time	Mid/Ave Date/Time	Tracer ID Spike ID	CRDL	Units	Screen Info - (Ci) Alpha Beta	PM Bin
J1G030241-001 EFXG2-1-AA WATER Comments: WATER	7/10/01	Bechtel Hanford, .0000	.000	7/03/01	8:25		2.00E+00	pCi/L	**NYS **NYS J1G030241	JW2
J1G030241-002 EFXG5-1-AA WATER Comments: WATER	7/10/01	Bechtel Hanford, .0000	.000	7/03/01	8:26		2.00E+00	pCi/L	**NYS **NYS J1G030241	JW2
J1G050000-534 B EF1JA-1-AA WATER Comments:	7/10/01	Bechtel Hanford,		7/03/01	8:25		2.00E+00	pCi/L	**NA **NA	JW2
J1G050000-534 C EF1JA-1-AC WATER Comments:	7/10/01	Bechtel Hanford,		7/03/01	8:25	2		pCi/L	**NA **NA	JW2
J1G050000-534 C EF1JA-1-AD WATER Comments:	7/10/01	Bechtel Hanford,		7/03/01	8:25	2		pCi/L	**NA **NA	JW2

Total Number of Samples In Batch: 00005

Batch Information:

Dry Wt: N

Decay Correct: Y

Blank Sub: None

Call In:

Uncert: Both

Sigma: 1.960

ODR: Target List + Other Detected

BLANK CRDL  
Strontium 90

2.00E+00

Tracer Yield  
Strontium Trace

(020-105)

Type  
RPDQC Control Limits

\*\* NYS = Not Yet Screened

\*\* NA = Not Applicable

\*\* Other = Other than Gross Alpha or Gross Beta

++ Indicates that Batch Information has changed for this sample. Print worksheet for details.

000017



## ICOC Fraction Transfer/Status Report

Q	Batch	Work Ord	CurStatus	Accepting	Comments
---	-------	----------	-----------	-----------	----------